CLAIMS

What is claimed is:

1. An electric motor comprising:

a single end frame;

a stator having a stator core, a first end fixed relative to the end frame, and a second end remote from the end frame;

a shaft supported by the end frame for rotation about a shaft axis;

a rotor having opposite sides spaced in the direction of the shaft axis, the rotor being connected to the shaft for rotation with the shaft relative to the stator, the shaft being supported on only one side of the rotor for rotation about the shaft axis; and

a canopy configured to cover at least a portion of the rotor and the second end of the stator during normal operation of the electric motor, a portion of the stator core being exposed between the end frame and the canopy at all times during normal operation of the electric motor, the shaft not being supported by the canopy for rotation about the shaft axis.

2. An electric motor as claimed in claim 1 wherein the electric motor is configured to selectively include one of a first performance specification and a second performance specification, the first performance specification requiring the stator core have a first overall axial length, the second performance specification requiring the stator core have a second overall axial length, and wherein the first overall axial length is smaller than the second overall axial length.

3. An electric motor as claimed in claim 1 and further comprising electrical components for operation of the electric motor, wherein the shaft is configured to be drivingly connected to a load, wherein the end frame includes a conduit box, and wherein the electrical components are at least partially positioned in the conduit box so a portion of at least one of the electrical components extends outside of the conduit box in a direction away from the load connection during normal operation of the electric motor.

4. An electric motor as claimed in claim 1 and further comprising electrical components for operation of the electric motor and lead wires for energization of the stator, wherein the end frame includes a conduit box and a lead wire window in communication with the conduit box, the lead wire window being fully enclosed by the end frame, wherein the electrical

components are at least partially positioned in the conduit box, and wherein the lead wires extend from the stator through the lead wire window and into the conduit box for connection to at least one of the electrical components.

5. An electric motor as claimed in claim 1 wherein the end frame includes a surface that is transverse to the shaft axis and that axially locates the stator with respect to the end frame.

6. An electric motor as claimed in claim 5 wherein the surface that is transverse to the shaft axis lies in a single plane.

7. An electric motor as claimed in claim 5 wherein the end frame includes a generally cylindrical surface that is centered on the shaft axis and that radially locates the stator with respect to the end frame.

8. An electric motor as claimed in claim 1 wherein the canopy includes a support base configured to support at least a portion of the electric motor during normal operation of the electric motor.

9. An electric motor as claimed in claim 1 wherein the shaft is drivingly connected to a fluid pump for pumping fluid through fluid jets in a hydromassage bathtub.

10. An electric motor comprising:

a single end frame including a conduit box;

a stator having a first end fixed relative to the end frame and a second end remote from the end frame;

a shaft supported by the end frame for rotation about a shaft axis;

a rotor having opposite sides spaced in the direction of the shaft axis, the rotor being connected to the shaft for rotation with the shaft relative to the stator, the shaft being supported on only one side of the rotor for rotation about the shaft axis;

a canopy configured to cover at least a portion of the rotor and the second end of the stator during normal operation of the electric motor, the shaft not being supported by the canopy for rotation about the shaft axis; and

electrical components for operation of the electric motor, the electrical components being at least partially positioned in the conduit box, the electrical components being removable from the conduit box without removing the canopy.

11. An electric motor as claimed in claim 10 wherein the electrical components include a capacitor, a power cord, and an air switch, and wherein the capacitor is removable from the conduit box without removing the other electrical components.

12. An electric motor as claimed in claim 11 wherein one of the power cord and the air switch is removable from the conduit box without removing an other one of the power cord and the air switch from the conduit box.

13. An electric motor as claimed in claim 12 wherein the other of the power cord and the air switch is removable from the conduit box solely by removing the capacitor, the one of the power cord and the air switch, and the other of the power cord and the air switch from the conduit box.

14. An electric motor as claimed in claim 10 wherein the electrical components include a capacitor, a power cord, and an air switch, wherein the conduit box includes a surface defining an aperture, the aperture having a main portion and slot portion extending from the main portion, and wherein a portion of the air switch and a portion of the power cord are each received in the slot portion and a portion of the capacitor is received in the main portion.

15. An electric motor as claimed in claim 10 wherein the conduit box includes a surface defining an aperture, the aperture being fully enclosed by the surface, wherein the electrical components include an air switch, the air switch being connected to the surface of the conduit box adjacent the aperture so the air switch extends through the aperture during normal operation of the electric motor, and wherein the air switch is removable from the conduit box by removing the portion of the air switched located inside the conduit box through the aperture.

16. An electric motor as claimed in claim 10 wherein the stator includes a stator core, and wherein a portion of the stator core is exposed between the canopy and the end frame at all times during normal operation of the electric motor.

17. An electric motor as claimed in claim 10 wherein the shaft is configured to be drivingly connected to a load, and wherein the electrical components are at least partially positioned in the conduit box so a portion of at least one of the electrical components extends outside of the conduit box, the portion of the at least one of the electrical components that extends outside of the conduit box extending in a direction away from the load connection.

18. An electric motor comprising:

a single end frame;

a stator fixed relative to the end frame;

a shaft supported by the end frame for rotation about a shaft axis, the end frame including a surface that is transverse to the shaft axis and that the stator is fixed against to locate the stator relative to the end frame; and

a rotor having opposite sides spaced in the direction of the shaft axis, the rotor being connected to the shaft for rotation with the shaft relative to the stator, the shaft being supported on only one side of the rotor for rotation about the shaft axis.

19. An electric motor as claimed in claim 18 and further comprising electrical components for operation of the electric motor and lead wires for energization of the stator, wherein the end frame includes a conduit box and a lead wire window in communication with the conduit box, the lead wire window being fully enclosed by the end frame, wherein the electrical components are at least partially positioned in the conduit box, and wherein the lead wires extend from the stator through the lead wire window and into the conduit box for connection to at least one of the electrical components.

20. An electric motor as claimed in claim 19 wherein the stator defines a first width in a direction perpendicular to the shaft axis, wherein the conduit box defines a second width in a direction substantially tangential to the surface of the end frame that is transverse to the shaft axis, and wherein the second width is smaller than the first width.

21. An electric motor as claimed in claim 18 and further comprising a bearing that supports the shaft for rotation about the shaft axis, wherein the end frame includes a bearing hub that supports the bearing, wherein the end frame includes a cylindrical surface that the stator is fixed against to locate the stator relative to the end frame, wherein the bearing hub defines a bearing bore having a cylindrical surface, and wherein the cylindrical surface of the end frame and the cylindrical surface of the bearing bore are concentric about the shaft axis.

22. An electric motor as claimed in claim 18 and further comprising a bearing that supports the shaft for rotation about the shaft axis, wherein the end frame includes a bearing hub that supports the bearing, wherein the bearing hub defines a bearing bore having a

surface that is transverse to the shaft axis, and wherein the surfaces of the end frame and the bearing bore that are transverse to the shaft axis are each perpendicular to the shaft axis.

23. An electric motor as claimed in claim 18 wherein the end frame includes a cylindrical surface that the stator is fixed against to locate the stator relative to the end frame, wherein the stator includes a stator core, and wherein a generally cylindrical portion of the stator core is radially supported by the cylindrical surface and a planar portion of the stator core is axially supported by the surface of the end frame that is transverse to the shaft axis.

24. An electric motor as claimed in claim 18 and further comprising first and second bearings that supports the shaft for rotation about the shaft axis, wherein the end frame includes a bearing hub that defines a bearing bore having a surface that is transverse to the shaft axis and a cylindrical surface centered on the shaft axis, wherein the cylindrical surface includes a groove sized to receive a retaining ring, and wherein the first bearing is supported by the surface that is transverse to the shaft axis and the second bearing is supported by the retaining ring so the first bearing is spaced from the second bearing.

25. An electric motor as claimed in claim 18 wherein the surface of the end frame that is transverse to the shaft axis is a continuous surface.

26. An electric motor as claimed in claim 18 and further comprising a canopy configured to cover a portion of the rotor and the stator normal operation of the electric motor, wherein the canopy is supported by at least one of the stator and the end frame.

27. An electric motor comprising:

a single end frame including a conduit box and a lead wire window in communication with the conduit box, the lead wire window being fully enclosed by the end frame;

electrical components for operation of the electric motor, the electrical components being at least partially positioned in the conduit box;

a stator fixed relative to the end frame;

lead wires for energization of the stator, the lead wires extending from the stator through the lead wire window and into the conduit box for connection to at least one of the electrical components;

a shaft supported by the end frame for rotation about a shaft axis; and

a rotor having opposite sides spaced in the direction of the shaft axis, the rotor being connected to the shaft for rotation with the shaft relative to the stator, the shaft being supported on only one side of the rotor for rotation about the shaft axis.

28. An electric motor as claimed in claim 27 wherein the end frame includes a stator locating member that locates the stator with respect to the end frame.

29. An electric motor as claimed in claim 28 wherein the stator locating member includes a continuous surface.